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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,583	12/20/2001	Sven Anders Borje Svensson	4740-100	3277

24112 7590 09/07/2005	EXAMINER
COATS & BENNETT, PLLC	SCHUBERT, KEVIN R

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DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>8/18/05</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　a)☐ All b)☐ Some * c)☐ None of:

　　1.☐ Certified copies of the priority documents have been received.

　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claims 1-34 have been considered.

Claim Rejections - 35 USC § 102

5   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for

the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or
in public use or on sale in this country, more than one year prior to the date of application for
10   patent in the United States.

Claims 1-6,11-27, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Ketcham,

U.S. Patent No. 6,075,860.

15   As per claims 1,26, and 31, the applicant describes a method of authenticating a wireless device

comprising the following limitations which are met by Ketcham:

a) receiving an authentication challenge from said first wireless network at a first wireless device

(Col 4, lines 16-34; Fig 1);

b) forwarding said authentication challenge from said first wireless device to a second wireless

20   device storing an authentication key (Col 4, lines 16-34; Fig 1);

c) calculating an authentication response based on said authentication key at said second

wireless device (Col 4, lines 16-34; Fig 1);

d) forwarding said authentication response from said second wireless device to said first wireless

device (Col 4, lines 16-34; Fig 1);

25   e) transmitting said authentication response from said first wireless device to said first wireless

network to authenticate said first wireless device to said first wireless network (Col 4, lines 16-34; Fig 1);

Ketcham discloses a remote terminal (102 of Fig 1) which is the second wireless device, a

wireless modem (110 of Fig 1) which is the first wireless device, and a first wireless network (104 of Fig

1). The first wireless network transmits a random number (authentication challenge) to the first wireless device over a wireless communication (114 of Fig 1). The first wireless device then forwards the authentication challenge to the second wireless device which calculates an authentication response using an authentication key stored at the second wireless device. The response is then forwarded to the first

5   device over the cord which connects the second and first wireless devices (see cord between 102 and 110 of Fig 1). The first wireless device then transmits the authentication response to the first wireless network.

As per claim 2, the applicant describes the method of claim 1, which is met by Ketcham, with the

10   following limitation which is also met by Ketcham:

Wherein said second wireless device is a wireless communication mobile terminal (Col 5, lines 7-10).

As per claim 3, the applicant describes the method of claim 1, which is met by Ketcham, with the

15   following limitation which is also met by Ketcham:

Wherein receiving said authentication challenge and transmitting said authentication response occur across a wireless communication interface (Col 5, lines 65-67).

As per claims 4 and 27, the applicant describes the method of claims 3 and 26, which are met by

20   Ketcham, with the following limitation which is also met by Ketcham:

Wherein said wireless communication interface is a wireless local area network interface (Col 5, lines 52-55).

As per claims 5 and 6, the applicant describes the method of claim 1, which is met by Ketcham,

25   with the following limitation which is also met by Ketcham:

Wherein forwarding said authentication challenge and forwarding said authentication response occur across a communication interface connecting said first and second wireless devices (cord between 110 and 102 of Fig 1).

As per claims 11,16,23, and 24, wherein said authentication key is a private key, and wherein said authentication challenge is generated on a public key associated with said private key (Col 6, lines 61-67).

As disclosed by Ketcham, the authentication key can either be a symmetric or part of a asymmetric key pair.

As per claims 12,15,17, and 18, the applicant describes the method of claim 1, which is met by Ketcham, with the following limitation which is also met by Ketcham:

Wherein calculating an authentication response based on said authentication key comprises performing a mathematical operation on said authentication challenge using said authentication key to obtain said authentication response (Col 4, lines 16-34).

As per claim 13, the applicant describes the method of claim 1, which is met by Ketcham, with the following limitation which is also met by Ketcham:

Further comprising authenticating said first wireless device by said first wireless network based on said authentication response (Col 4, lines 16-34).

The authentication response validates both the first and second wireless devices.

As per claims 14,21, and 25, the applicant describes the method of claims 13 and 19, which are met by Ketcham, with the following limitation which is also met by Ketcham:

Wherein said authentication key comprises a shared key known to said first wireless network (Col 6, lines 57-61).

As per claim 19, the applicant describes the method of claim 14, which is met by Ketcham, with the following limitation which is also met by Ketcham:

a) generating said authentication challenge at a second wireless network (Col 3, line 57 to Col 4, line 34);

5   b) forwarding said authentication response from said first wireless network to said second wireless network (Col 3, line 57 to Col 4, line 34);

c) authenticating said first wireless device by said second wireless network based on said authentication response (Col 3, line 57 to Col 4, line 34);

The second network is the left side of Fig 1. An authentication challenge is generated by the

10   second wireless device to begin authentication by challenging the first wireless network to send an authentication response and begin the authentication process. The first wireless network responds with an authentication response (random number). The second wireless device then authenticates the first wireless device by performing encryption algorithms associated with the random number and sending the result back to the first wireless network.

15

As per claim 20, the applicant describes the method of claim 19, which is met by Ketcham, with the following limitation which is also met by Ketcham:

a) sending an authentication result from the second wireless network to the first wireless network (Col 3, line 57 to Col 4, line 34);

20   b) providing or denying access for the first wireless device to the first wireless network based on said authentication result (Col 3, line 57 to Col 4, line 34).

As per claim 22, the applicant describes the method of claim 21, which is met by Ketcham, with the following limitation which is also met by Ketcham:

25   a) using said authentication challenge and said shared key to compute an expected authentication response at said second wireless network (Col 3, line 57 to Col 4, line 34);

b) comparing said expected authentication response with the actual authentication response

received from said first wireless network (Col 3, line 57 to Col 4, line 34).

Claim Rejections - 35 USC § 103

5   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a.whole would have been obvious
10 > at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention
> was made.

15   Claims 7,9-10,28-30, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ketcham in view of Eberhard, U.S. Patent Application Publication No. 2003/0056131.

           As per claims 7,9-10,28-30, and 32-34, the applicant describes the method of claim 5 (etc), which

is met by Ketcham, with the following limitation which is met by Eberhard:

20   Wherein said communication interface is a wireless communication interface (Eberhard: [0020]);

           Ketcham discloses all the limitations of the claims on which claims 7,9-10,28-30, and 32-34

depend. However, Ketcham discloses that the communication between the first and second wireless

devices is a cord. Ketcham does not disclose that the communication between the first and second

wireless devices is wireless.

25   Eberhard discloses that wireless communication devices such as laptops and pdas can

communicate wireless through protocols like Bluetooth. It would have been obvious to one of ordinary

skill in the art at the time the invention was filed to combine the ideas of Eberhard with those of Ketcham

and incorporate the use of wireless communication between the wireless devices because having

wireless devices eliminates the need for a bulky cord.

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Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ketcham in view

of Ternullo, U.S. Patent Application Publication No. 2002/0191258.

As per claims 7 and 8, the applicant describes the method of claim 5, which is met by Ketcham,

with the following limitation which is met by Ternullo:

Wherein said wireless communication interface is an optical interface (Ternullo: [100]);

Ketcham discloses all the limitations of claim 5. However, Ketcham does not disclose that the

communication between the first and second wireless devices is an optical communication.

Ternullo discloses that optical communication is a common form of communication between wireless

devices. It would have been obvious to one of ordinary skill in the art at the time the invention was filed to

combine the ideas of Ternullo with those of Ketcham and use optical communication because it is a

common form of communication.

Response to Arguments

Applicant's arguments, see Remarks filed 8/18/05, with respect to claims 1 and 26 have been

fully considered but they are not persuasive. The applicant argues that the second wireless device, not

the first wireless device, is authenticated in the primary reference, Ketcham. The examiner disagrees.

Ketcham discloses a method of authentication in which a system, comprised of a remote terminal (102 of

Fig 1) and its accompanying wireless modem (110 of Fig 1), is authenticated to a first wireless network

(104 of Fig 1). Hence, the remote terminal and the wireless modem are collectively authenticated as part

of system authentication. The system of Ketcham differs from a typical computer in that the modem is

external. However, in both a typical computer authentication (with an internal modem) and the

authentication present in Ketcham (with an external modem), it is the computing system which is

authenticated, not any part or particular piece of hardware. The fact that the modem is external in

Ketcham makes no difference to system authentication. Further, the applicant's statement that only the

remote terminal is authenticated is logically inconsistent with the authentication taking place. If the first

network authenticates only the remote terminal and not the system, authentication is futile because the

first network would have no idea if modification were being done on an untrusted intermediary, the

external modem. Rather, the first network authenticates the system and thereby knows that it has a

secure communication with the system.

5   Applicant's arguments with respect to claim 31 have been fully considered but they are not

persuasive. The applicant argues that the non-provisioned device (wireless modem) of Ketcham does

not access the wireless network. The examiner disagrees. Again, it is the system consisting of the

wireless modem and the remote terminal which gains access to the wireless network. Further, the

examiner fails to see the applicant's reasoning that the remote terminal gains access to the network but

10   the wireless modem doesn't. The role of the wireless modem (110 of Fig 1) is to gain access to the

wireless network (104 of Fig 1) through the wireless interface (114 of Fig 1) and to communicate data

received from the wireless network to remote terminal over a cord (Fig 1). The idea that the remote

terminal gains access to the wireless network and the wireless modem doesn't is not consistent with the

primary reference.

15

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth

in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from

20   the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date

of this final action and the advisory action is not mailed until after the end of the THREE-MONTH

shortened statutory period, then the shortened statutory period will expire on the date the advisory action

is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX

25   MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Kevin Schubert whose telephone number is (571) 272-4239. The examiner can normally

be reached on M-F 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

5   Emmanuel Moise can be reached on (571) 272-3868. The fax phone number for the organization where

this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available through

10   Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC)

at 866-217-9197 (toll-free).

KS

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EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER